

Date: Mon, 12 Oct 2009 01:27:52 -0400To: "Admiral William Fallon - Co-chair, CSIS Commission on Smart Global Health Policy" <wjf@wjfallon.com>

From: Lloyd Etheredge <lloyd.etheredge@yale.edu>

Subject: **Fresh thinking -2: Smart power & a rapid learning international health system**

Dear Admiral Fallon:

The following discussion & attachments re smart power and global health (for Baruch Fischhoff's National Academy of Sciences panel on improving intelligence) might be of interest. A rapid learning international health system is a bold vision but it is feasible. The vision also implies early discussions and political opportunities for relationship-building with China because they are embarking, even more boldly than the US, on a major reform of their national health system - \$123 billion over the next three years - with a key mandate to develop electronic health records - as the Obama Administration wants to do - for efficiency and rapid learning.

Re the attached background material: The N=6,000+ rarer diseases, for which NIH is preparing a (potentially global) online patient registry & patient/physician/research linkup system includes (because "rarer" is defined as <200,000 in the US population of 300 million) almost all of the tropical diseases and most major diseases affecting children in UDCs.

[There is wide variation, in the US and worldwide, in treatments for most of these 6,000+ conditions as major drug companies have not been interested to do research. But a global linkup system (disease codes that can be used across the Internet, pop-up menus at the NIH portal) will support quick statistical analysis and feedback about the range of treatments and who is getting the best results. So 5% - 7% of the world's population (300 million to 400 million people) & their physicians can start to get immediate benefits next year - i.e. a vision that is more likely if your Commission can give a boost to the global vision.]

One of the important, next-step, benefits of these global rapid learning systems is that patient registries & physician link-ups make it easier to

develop and improve vaccines for these diseases and to conduct clinical trials. There also are areas - e.g., women's health in Third World countries - where US-based leadership also can accelerate research progress via these linkups.

The major disease components (e.g., breast cancer) from NIH also will be available soon. The US research/evidence-based-medicine system is moving from the N=10,000 biobank of Kaiser & RWJF to N=200,000, then N=500,000 with NIH support and genome maps (3 billion base pairs per patient), Kaiser is building basic online systems that can allow physicians, worldwide, to input patient characteristics and get immediate, state-of-the-art information about best treatment recommendations.

For health (and, secondarily, for smart power) there can be a US -linked global system underway within 2-3 years that touches the lives and practices of medicine affecting about 6.8 billion people.

I have provided Lisa Carty with contact/follow-up information for Steve Groft, in the NIH Director's office, if this rapid learning global vision is of interest. I don't have a good contact for the early China linkup suggestion and do not know where this stands.

best regards,
LE

Date: Mon, 28 Sep 2009 14:23:07 -0400

To: "Dr. Baruch Fischhoff - Chair, National Academy of Sciences panel on Improving Intelligence" baruch@cmu.edu

From: Lloyd Etheredge lloyd.etheredge@yale.edu

Subject: **Improving US intelligence: Reframing questions; Political leadership & combinatorial cognitive processes? Health links & DNI**

Dear Dr. Fischhoff:

Re the work of your new National Academy panel: Since the early

Cold War the principal responsibility and questions for US intelligence agencies have involved threat assessment. Drawing upon the scientific specialities represented on your panel - which suggest that this step might be useful - you might want to design an experiment to *reframe* questions.

For example, it might be useful for the DNI to analyze **Political Opportunities** as part of national assessments and as a recurrent section in President Obama's Daily Brief. President Obama has made it clear that he wants to create a new era of political linkups and cooperation across a wide range of issues. Thus, a well-designed Political Opportunities assessment could support the President's priorities.

A Specific Experiment: Health as a Political Opportunity?

I suggest that you design a two-year experiment that uses opportunities to improve international health as a new, specific question to be addressed in each DNI national assessment and in its high-visibility daily alerting system for the President.

There are three justifications for selecting health: 1.) Politically, over the years, regional meetings of US Ambassadors to improve public diplomacy have produced the feedback: "It isn't more Voice of America programs that we need; give us specific initiatives that connect America to the daily lives of people in our countries;" 2.) The DNI's staff report ICA 2008-10D (the enclosed pages) includes an inspired section, "Health as Opportunity," reviewing past success and strengthening the political case for this focus.

3.) There are new, revolutionary global opportunities that will come alive as a simple add-on to the Obama Administration's commitment to a domestic rapid-learning system for health. These will arise via the new national R&D system of electronic health records that your Institute of Medicine [which is part of the National Academy system and that shares the Washington, DC building] has helped to design. One new opportunity - for all patients, worldwide, who suffer from the 6,000+ rarer diseases [several hundred million people] to benefit, from a US initiative that could begin now - is identified in the

enclosed letter of 7/21/2009.

Even more strongly (re benefits to US-China linkups]: President Obama has given high political priority to develop US-China ties. The enclosed letter of 8/15/2009 and background paper analyze China's plans [formulated during the Bush-Obama transition period in the US, and perhaps unknown to President Obama] to spend \$124 billion over three years to transform its own healthcare sector, an initiative in which their own shift to electronic health records (with most details still under discussion) will play a key role. If these elements were combined in a briefing to President Obama, I think his view would be that US discussions of mutual interests, interoperable coding systems for R&D collaboration, etc. with China already should be underway.

[Within a few weeks, if rumors are accurate, a coalition of US non-government organizations & NIH will announce funding for a new N=200,000 online reference biobank with 3 billion DNA base pairs and ten years of medical history for each patient. This, also - with interoperable codings and nomenclature discussions - can link with systems in China and other nations and be available for querying, via the Internet to health practitioners and patients in all countries. With creative US leadership - if President Obama sees the connections - the daily practice of medicine, in all countries, could be affected and improved, in about 12-18 months.]

Combinatorial Cognitive Processes and Opportunities for Rapid Progress

For your Report, I think it will be useful to draw the potential lessons from the scientific literature concerning scientific innovation - e.g., W. Brian Arthur's excellent The Nature of Technology: What It Is and How It Evolves (Free Press 2009) for *political innovation/creativity*. A lot of the creative engineering process requires combinatorial intelligence [and, by implication, *information systems that support combinatorial intelligence*] not just the maximum use of scientific hypothesis-testing methods.

Concerning the feasibility of Political Opportunity questions and a

health experiment: The original suggestion of a rapid-learning international health system, based on electronic health records, was discussed with HHS during the Bush Administration. The high-level HHS response was "I am sure that there are recommendations for this, from various panels somewhere in the system, but we have our hands full just coping with the US domestic issues." There is nothing about the pieces of information that I have cited - in this illustration - about America's new high foreign policy priority for US-China linkups, the IT role in China's \$124 billion healthcare system reform, the nature of evidence and databases concerning the 6,000+ rarer diseases (linked to the economics and incentives of the US drug industry), etc. that is secret or that requires spycraft to learn. But to help President Obama's leadership, and for the pieces to come together, requires reframing the question (for part of the analysis) from national security threats to political opportunities. . . . And part of the challenge for the DNI and his new \$75 billion/year system will be to learn - and bring together - what the US government already knows.

best regards,
Lloyd Etheredge